

1           **CLAIMS**

2   What is claimed is:

3           1. A panel system for constructing a low profile  
4   enclosure comprising:

5           a floor assembly for enclosing the bottom of said low  
6   profile enclosure;

7           a pair of side wall assemblies for enclosing the left  
8   side and right side of said low profile enclosure;

9           a rear wall assembly for enclosing the back of said low  
10   profile enclosure;

11           a pivoting door assembly for enclosing and providing  
12   ingress into and egress from said low profile enclosure;

13           a telescoping roof assembly for enclosing the top of  
14   said low profile enclosure system and for providing ingress  
15   into and egress from said low profile enclosure;

16           wherein said pivoting door assembly and said telescoping  
17   roof assembly cooperate to allow walk-in access to the  
18   contents of said low profile enclosure, and wherein said low  
19   profile enclosure can be shipped in a disassembled state and  
20   assembled on a desired site.

21

22           2. The low profile enclosure panel system of claim 1  
23   wherein said floor assembly includes;

1        a pair of like-configured floor panel members for  
2 constructing said floor assembly, each of said floor members  
3 having, a top surface said top surface having a means of  
4 attaching said floor assembly to said side wall assemblies,  
5 said rear wall assembly, and said door assembly, a bottom  
6 surface constructed and arranged to provide rigidity and  
7 stability to said floor assembly, a locking edge constructed  
8 and arranged with an means to connect like-configured locking  
9 edges of said like-configured floor panels into said floor  
10 assembly, a ramp edge for easy loading and unloading of said  
11 heavy duty enclosure, two closed edges for maintaining a  
12 weather resistant enclosure.

13

14        3. The low profile enclosure panel system of claim 2  
15 wherein said means to connect like-configured locking edges  
16 includes a series of spaced apart fingers and recesses along  
17 the locking edge of each said bottom panel, each of said  
18 fingers being provided with at least one countersunk aperture  
19 for receiving a fastener, said fingers and recesses  
20 constructed and arranged so that said fingers overlap and  
21 mateably engage said recesses and said fasteners secure said  
22 floor panel members together in an inter-fitting engagement  
23 with their respective top surfaces in a co-planar  
24 arrangement.

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2       4. The low profile enclosure panel system of claim 2  
3 wherein said floor panel members include a plurality of  
4 spaced apart tubes extending through each said floor panel  
5 under said top surface and above said bottom surface and  
6 extending between said locking edge and said ramp edge, said  
7 tubes being sized to accept floor joists thereby adding  
8 increased weight capacity and stability to said enclosure.

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10      5. The low profile enclosure panel system of claim 2  
11 wherein said means of attaching said wall and said door  
12 assemblies to said top surface includes a plurality of  
13 locking posts arranged in a linear fashion adjacent to said  
14 closed edges and extending upwardly from said top surface,  
15 said locking posts constructed and arranged to cooperate with  
16 said wall assemblies;

17       wherein said wall assemblies are secured to said floor  
18 panels via said locking posts.

19

20      6. The low profile enclosure panel system of claim 2  
21 wherein said means of attaching said wall and said door  
22 assemblies to said top surface includes at least one hinge  
23 pin arranged adjacent to said locking posts and said ramp

1 edge, said hinge pin constructed and arranged to cooperate  
2 with said wall assemblies and said door assembly;

3 wherein said door assembly is allowed to open and close  
4 in a pivotal fashion.

5

6 7. The low profile enclosure panel system of claim 2  
7 wherein said bottom surface includes integrally formed cross-  
8 bracing;

9 wherein said cross-bracing provides increased weight  
10 capacity and stability to said enclosure.

11

12 8. The low profile enclosure panel system of claim 1  
13 wherein said left wall assembly and said right wall assembly  
14 includes two like-constructed first wall panel members and  
15 two like-constructed second wall panel members and two like-  
16 constructed third wall panel members, wherein said left wall  
17 assembly includes one of said first wall panels and one of  
18 second wall panels and one of said third wall panels and said  
19 right side wall assembly includes one of said first wall  
20 panels and one of second wall panels and one of said third  
21 wall panels.

22  
23 9. The low profile enclosure panel system of claim 8  
24 wherein said first wall panel member includes a first

1 longitudinal end having an attachment means constructed and  
2 arranged to cooperate with a floor assembly, a second  
3 longitudinal end having an attachment means constructed and  
4 arranged to cooperate with a roof assembly, a first  
5 horizontal edge constructed generally flat extending inwardly  
6 to a depending attachment means constructed and arranged to  
7 cooperate with a second wall panel member or a door panel  
8 member in a perpendicular relationship, and a second  
9 horizontal edge having an attachment means constructed and  
10 arranged to cooperate with a second wall panel member in a  
11 co-planar relationship.

12

13       10. The low profile enclosure panel system of claim 9  
14 wherein said first longitudinal end attachment means includes  
15 at least one integrally formed socket and said second  
16 longitudinal end attachment means includes at least one  
17 integrally formed socket.

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19       11. The low profile enclosure panel system of claim 9  
20 wherein said first horizontal edge attachment means includes  
21 a semi-circular conduit extending from about the second  
22 longitudinal end toward the middle portion of said edge, said  
23 conduit having a generally circular aperture for accepting a

1 dowel centrally located within said middle portion end of  
2 said semi-circular conduit;

3 wherein said semi-circular conduit is brought into an  
4 overlapping relationship with a corresponding semi-circular  
5 conduit and a dowel pin enters said circular apertures in  
6 each conduit resulting in a mechanically secure connection  
7 between the two said panels.

8

9 12. The heavy duty enclosure panel system of claim 9  
10 wherein said second horizontal edge attachment means includes  
11 a semi-circular conduit extending from about the first  
12 longitudinal end past the middle portion of said edge, said  
13 conduit having a generally circular aperture for accepting a  
14 dowel centrally located within said middle portion end of  
15 said semi-circular conduit;

16 wherein said semi-circular conduit is brought into an  
17 overlapping relationship with a corresponding semi-circular  
18 conduit and a dowel pin enters said circular apertures in  
19 each conduit resulting in a mechanically secure connection  
20 between the two said panels.

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22 13. The low profile enclosure panel system of claim 8  
23 wherein said second wall panel member includes a first  
24 longitudinal end having an attachment means constructed and

1 arranged to cooperate with a floor assembly, a second  
2 longitudinal end having an attachment means constructed and  
3 arranged to cooperate with a roof assembly, a first  
4 horizontal edge having an attachment means constructed and  
5 arranged to cooperate with a first wall panel member in a co-  
6 planar relationship, and a second horizontal edge having an  
7 attachment means constructed and arranged to cooperate with a  
8 third wall panel member in a co-planar relationship.

9

10       14. The low profile enclosure panel system of claim 13  
11 wherein said first longitudinal end attachment means includes  
12 at least one integrally formed socket and said second  
13 longitudinal end attachment means includes at least one  
14 integrally formed socket.

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16       15. The low profile enclosure panel system of claim 13  
17 wherein said first horizontal edge attachment means includes  
18 a semi-circular conduit extending from about the second  
19 longitudinal end toward the middle portion of said edge, said  
20 conduit having a generally circular aperture for accepting a  
21 dowel centrally located within said middle portion end of  
22 said semi-circular conduit;

23       wherein said semi-circular conduit is brought into an  
24 overlapping relationship with a corresponding semi-circular

1 conduit and a dowel pin enters said circular apertures in  
2 each conduit resulting in a mechanically secure connection  
3 between the two said panels.

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5       16. The heavy duty enclosure panel system of claim 13  
6 wherein said second horizontal edge attachment means includes  
7 a semi-circular conduit extending from about the first  
8 longitudinal end past the middle portion of said edge, said  
9 conduit having a generally circular aperture for accepting a  
10 dowel centrally located within said middle portion end of  
11 said semi-circular conduit;

12       wherein said semi-circular conduit is brought into an  
13 overlapping relationship with a corresponding semi-circular  
14 conduit and a dowel pin enters said circular apertures in  
15 each conduit resulting in a mechanically secure connection  
16 between the two said panels.

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18       17. The low profile enclosure panel system of claim 8  
19 wherein said third wall panel member includes a first  
20 longitudinal end having an attachment means constructed and  
21 arranged to cooperate with a floor assembly, a second  
22 longitudinal end having an attachment means constructed and  
23 arranged to cooperate with a roof assembly, a first  
24 horizontal edge having an attachment means constructed and

1 arranged to cooperate with a second wall panel member in a  
2 co-planar relationship, and a second horizontal edge  
3 constructed generally flat extending inwardly to a depending  
4 attachment means constructed and arranged to cooperate with a  
5 second wall panel member or a door panel member in a  
6 perpendicular relationship.

7

8       18. The low profile enclosure panel system of claim 17  
9 wherein said first longitudinal end attachment means includes  
10 at least one integrally formed socket and said second  
11 longitudinal end attachment means includes at least one  
12 integrally formed socket.

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14       19. The low profile enclosure panel system of claim 17  
15 wherein said first horizontal edge attachment means includes  
16 a semi-circular conduit extending from about the second  
17 longitudinal end toward the middle portion of said edge, said  
18 conduit having a generally circular aperture for accepting a  
19 dowel centrally located within said middle portion end of  
20 said semi-circular conduit;

21       wherein said semi-circular conduit is brought into an  
22 overlapping relationship with a corresponding semi-circular  
23 conduit and a dowel pin enters said circular apertures in

1 each conduit resulting in a mechanically secure connection  
2 between the two said panels.

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4       20. The heavy duty enclosure panel system of claim 17  
5 wherein said second horizontal edge attachment means includes  
6 a semi-circular conduit extending from about the first  
7 longitudinal end past the middle portion of said edge, said  
8 conduit having a generally circular aperture for accepting a  
9 dowel centrally located within said middle portion end of  
10 said semi-circular conduit;

11       wherein said semi-circular conduit is brought into an  
12 overlapping relationship with a corresponding semi-circular  
13 conduit and a dowel pin enters said circular apertures in  
14 each conduit resulting in a mechanically secure connection  
15 between the two said panels.

16

17       21. The low profile enclosure panel system of claim 1  
18 wherein said rear wall assembly includes a pair of like-  
19 constructed second wall panel members.

20

21       22. The low profile enclosure panel system of claim 1  
22 wherein said telescoping roof assembly includes a fixed roof  
23 panel, a telescoping roof panel, a left wall cap, and a right  
24 wall cap.

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2        23. The low profile enclosure panel system of claim 22  
3        wherein said fixed roof panel includes a top surface, a  
4        bottom surface, a front closed edge, a rear closed edge, a  
5        left closed edge, and a right closed edge, said bottom  
6        surface including a plurality of locking posts extending  
7        outwardly, said locking posts arranged in a linear fashion  
8        adjacent to said rear, left, and right closed edges, said  
9        locking posts constructed and arranged to cooperate with said  
10      sockets in said second longitudinal ends of said wall panels,  
11      wherein said fixed roof panel is secured to said wall panels  
12      via said locking posts, said upper surface including a pair  
13      of generally parallel V-shaped track grooves one of said  
14      track grooves positioned adjacent to said left closed edge  
15      and extending inward into said telescoping roof panel and one  
16      of said track grooves positioned adjacent to said right  
17      closed edge and extending inward into said telescoping roof  
18      panel, said lower surface including a pair of generally U-  
19      shaped outer track grooves one of said outer track grooves  
20      positioned adjacent to said left closed edge and extending  
21      inward into said telescoping roof panel and one of said outer  
22      track grooves positioned adjacent to said right closed edge  
23      and extending inward into said telescoping roof panel.

24

1        24. The low profile enclosure panel system of claim 22  
2 wherein said fixed roof panel is constructed and arranged to  
3 accept at least one steel roof support for adding increased  
4 weight capacity and stability to said roof assembly of said  
5 enclosure.

6

7        25. The low profile enclosure panel system of claim 22  
8 wherein said telescoping roof panel includes a top surface, a  
9 bottom surface, a front closed edge, a rear closed edge, a  
10 left closed edge, and a right closed edge, wherein said top  
11 surface includes a pair of integrally formed sockets, one of  
12 said top surface sockets located adjacent to said left closed  
13 edge and said rear closed edge and one of said top surface  
14 sockets located adjacent to said right closed edge and said  
15 rear closed edge, said top surface sockets constructed and  
16 arranged to cooperate with C-shaped outer track guides having  
17 integrally formed locking posts, wherein said bottom surface  
18 includes a pair of integrally formed sockets, wherein one of  
19 said bottom surface sockets is located adjacent to said left  
20 closed edge and said front closed edge and one of said bottom  
21 surface sockets is located adjacent to said right closed edge  
22 and said front closed edge, said bottom surface sockets  
23 constructed and arranged to cooperate with J-shaped inner  
24 track guides having integrally formed locking posts, wherein

1 said bottom surface includes a pair of generally parallel  
2 outwardly extending V-shaped guide rails, said guide rails  
3 integrally formed on said bottom surface, wherein one of said  
4 guide rails is located adjacent to said left closed edge and  
5 one of said guide rails is located adjacent to said left  
6 closed edge;

7 whereby said V-shaped guide rails are constructed and  
8 arranged to slidingly cooperate with said V-shaped track  
9 guides and said C-shaped outer track guides are constructed  
10 and arranged to slidingly cooperate with said U-shaped outer  
11 track grooves and said J-shaped inner track guides are  
12 constructed and arranged to slidingly cooperate with U-shaped  
13 inner track grooves located within said left and said right  
14 wall caps to allow said telescoping roof panel to telescope  
15 inwardly and outwardly with respect to said fixed roof panel.

16

17 26. The low profile enclosure panel system of claim 22  
18 wherein said left wall cap includes an top surface, a bottom  
19 surface, an inner closed edge, and an outer closed edge,  
20 wherein said lower surface is constructed with a plurality of  
21 outwardly extending locking posts which are constructed and  
22 arranged to cooperate with integrally formed sockets located  
23 at the second longitudinal end of said wall panels, said  
24 bottom surface including an inner track groove having a

1 generally U-shaped cross section, said inner track groove  
2 located adjacent to and extending along said inner closed  
3 edge, said top surface including an upper track groove having  
4 a generally V-shaped cross section and extending along the  
5 longitudinal centerline of said left wall cap, wherein said  
6 inner track groove and said upper track groove are  
7 constructed and arranged to cooperate with said telescoping  
8 roof panel to allow said telescoping roof panel to telescope  
9 inwardly and outwardly with respect to said fixed roof panel.

10

11       27. The low profile enclosure panel system of claim 22  
12 wherein said right wall cap includes an top surface, a bottom  
13 surface, an inner closed edge, and an outer closed edge,  
14 wherein said lower surface is constructed with a plurality of  
15 outwardly extending locking posts which are constructed and  
16 arranged to cooperate with integrally formed sockets located  
17 at the second longitudinal end of said wall panels, said  
18 bottom surface including an inner track groove having a  
19 generally U-shaped cross section, said inner track groove  
20 located adjacent to and extending along said inner closed  
21 edge, said top surface including an upper track groove having  
22 a generally V-shaped cross section and extending along the  
23 longitudinal centerline of said left wall cap, wherein said  
24 inner track groove and said upper track groove are

1 constructed and arranged to cooperate with said telescoping  
2 roof panel to allow said telescoping roof panel to telescope  
3 inwardly and outwardly with respect to said fixed roof panel.

4

5       28. The low profile enclosure panel system of claim 1  
6 wherein said door assembly includes a left door panel  
7 including a left door header and a right door panel including  
8 a right door header, wherein said left door panel and said  
9 right door panel enclose and provide ingress into and egress  
10 out of said low profile enclosure.

11

12       29. The low profile enclosure panel system of claim 28  
13 wherein said left door includes a first longitudinal end  
14 including a plurality of integrally formed sockets, said  
15 sockets constructed and arranged to cooperate with a hinge  
16 means, a second longitudinal end including a plurality of  
17 integrally formed sockets, a first horizontal edge having a  
18 semi-circular conduit extending from about said first  
19 longitudinal end past the middle portion of said edge, said  
20 conduit having an integrally formed hinge means, a second  
21 horizontal edge being generally flat, wherein said left door  
22 header is constructed with a plurality of outwardly extending  
23 locking posts which are constructed and arranged to cooperate

1 with said sockets located at said second longitudinal end of  
2 said left door panel.

3

4 30. The low profile enclosure panel system of claim 29  
5 wherein said hinge means includes a C-shaped annular portion  
6 for accepting a hinge pin, said C-shaped annular portion  
7 constructed and arranged to cooperate with a hinge clip to  
8 close said annular portion and allow pivoting movement of  
9 said door panels, wherein said C-shaped hinge means allows  
10 said left door panel to be assembled to said enclosure  
11 without partial disassembly of other portions of said  
12 enclosure.

13

14 31. The low profile enclosure panel system of claim 28  
15 wherein said right door includes a first longitudinal end  
16 including a plurality of integrally formed sockets, said  
17 sockets constructed and arranged to cooperate with a hinge  
18 means, a second longitudinal end including a plurality of  
19 integrally formed sockets, a first horizontal edge having a  
20 semi-circular conduit extending from about said second  
21 longitudinal end toward the middle portion of said edge, said  
22 conduit having an integrally formed hinge means, a second  
23 horizontal edge being generally flat, wherein said right door  
24 header is constructed with a plurality of outwardly extending

1 locking posts which are constructed and arranged to cooperate  
2 with said sockets located at said second longitudinal end of  
3 said right door panel.

4

5       32. The low profile enclosure panel system of claim 31  
6 wherein said hinge means includes a C-shaped annular portion  
7 for accepting a hinge pin, said C-shaped annular portion  
8 constructed and arranged to cooperate with a hinge clip to  
9 close said annular portion and allow pivoting movement of  
10 said door panels, wherein said C-shaped hinge means allows  
11 said right door panel to be assembled to said enclosure  
12 without partial disassembly of other portions of said  
13 enclosure.